

**Case 3251*****Thereva* Latreille, 1797 and *Phasia* Latreille, 1804 (Insecta, Diptera): proposed conservation of usage by designation of *Musca plebeja* Linnaeus, 1758 as the type species of *Thereva***

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**Abstract.** The purpose of this application, in relation to Article 67.2 of the Code, is to conserve the usage of the name *Thereva* Latreille, 1797 for a cosmopolitan genus of stiletto flies (family THEREVIDAE) that currently includes 201 species, and also the usage of *Phasia* Latreille, 1804 and PHASINAE for a group of tachinid flies (family TACHINIDAE), some of which are economically important as parasites of plant bugs (Heteroptera). It is proposed that *Musca plebeja* Linnaeus, 1758 should be designated as the type species of the therevid genus *Thereva*. *M. plebeja* was not one of the nominal species that were first associated with the name *Thereva* by Fabricius (1798). Fabricius used *Thereva* for a group of tachinid flies that are now referred to by the name *Phasia* Latreille, 1804.

**Keywords.** Nomenclature; taxonomy; Diptera; THEREVIDAE; TACHINIDAE; *Thereva*; *Phasia*; *Thereva plebeja*; stiletto flies; tachinids.

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1. Latreille (1797, p. 168) described a genus of stiletto flies (now in the family THEREVIDAE) and named it *Thereva*. He stated that the genus was characterised by two pulvilli ('deux pelotes') and wings that are held open over the abdomen and angled slightly upwards ('écartés, un peu assurgentes'). He described the abdomen as conical ('Abdomen conique, déprimé') and noted that the antennae are the length of the head with the last segment conical, articulated apically, and bearing a small lateral bristle ('Antennes de la longueur de la tête; dernier article conique, articulé à l'extrémité, avec une petite soie latérale').

2. The following year Fabricius (1798, pp. 549, 560) also used the name *Thereva*. His description did not mention the state of the pulvillus and on p. 560 he referred to the wings of *Thereva* as crassiform and opaque with maculations ('alis duabis,

crassis, maculates, opaci'). He described the large, rounded ciliate calypter of the wing ('squama halterum magna, rotundata, ciliata') and the body of *Thereva* as being fat and ovate ('corpus medium, crassum, obesum, ovatum'). Most significantly, Fabricius (1798, p. 549) described the antennae of *Thereva* as short, recumbent, compressed and bearing a seta ('Antennae breves, incumbentes, compressae, extrorsum crassiores, setiarum').

3. It is clear that Latreille (1797) and Fabricius (1798) were describing two very different groups of flies under the name *Thereva*. The characters described by the two authors place *Thereva* sensu Latreille in the superfamily ASILOIDEA (sub-order Brachycera) and *Thereva* sensu Fabricius in the subfamily PHASIIDAE (family TACHINIDAE; sub-order Cyclorhapha). In other words, Latreille was describing a group of stiletto flies and Fabricius was describing a group of tachinid flies.

4. Latreille's description made the generic name *Thereva* available in 1797, but he did not then assign any nominal species to the genus. However, in 1798 Fabricius provided a list of six species as members of the genus *Thereva* as he understood the concept. These were all tachinid species: *Conops subcoleoprata* Linnaeus, 1767, *Syrphus hemipterus*, *S. crassipennis* and *S. affinis* Fabricius, 1794; and two new species, *Thereva analis* and *T. obesa*. As recorded in the Commission's Opinion 896 (April 1970), *C. subcoleoprata* is the type species of *Phasia* Latreille, 1804 (p. 195) by subsequent monotypy and *S. crassipennis* is the type species of *Ectophasia* Townsend, 1912 by original designation; *T. obesa* is the type species of *Allophorella* Townsend, 1912 (which is a junior synonym of *Phasia*; see Herting & Dely-Draskovits, 1993). *S. affinis* is a junior synonym of *Phasia subcoleoprata* (Linnaeus), and *T. analis* Fabricius is a junior synonym of *Ectophasia crassipennis* (Fabricius). Designating any one of these nominal species as the type species would not conserve the universally accepted use of the name *Thereva* for a group of stiletto flies, and could threaten the tachinid names *Phasia* or *Ectophasia*.

5. Latreille (1802) associated the first stiletto fly species with *Thereva*. He (p. 441) gave '*Bibio plebeja* F.' as an 'exemple' of *Thereva*, and listed this as '*Bibio plebeia*. Fab.—*Musca plebeia*. Lin.'; he also included '*Bibio marginata* Fab.' in the genus. In 1810 (p. 421) Latreille stated that '*l'espèce qui sert de type*' of *Thereva* was '*Bibio plebeia*. Fab.', i.e. *Musca plebeja* Linnaeus, 1758 (p. 589).

6. As noted by Latreille (1802), Fabricius (1775, 1787, 1794, 1798 and also in 1805) consistently placed *Musca plebeja* Linnaeus in the nominal genus *Bibio* and described additional stiletto fly species in *Bibio*. Most other insect systematists publishing between 1800 and 1820 (e.g. Panzer, 1800, 1804; Meigen, 1803, 1804; Schellenberg, 1803; Fallén, 1814, 1815, 1820) followed the Fabrician concept of these taxa, describing phasiine tachinids within *Thereva* and placing stiletto flies in *Bibio*. Fabricius (1775, p. 756) used *Bibio* in a different taxonomic sense from that used previously by Geoffroy (1762, pp. 450, 568); Geoffroy's sense of *Bibio* is that in current use and was conserved by the Commission in Opinion 441 (January 1957) with *Tipula hortolana* Linnaeus, 1758 as the type species.

7. In 1820 Meigen changed his practice of 1803 and 1804 (see para. 6 above) and used the generic name *Thereva* in Latreille's sense for some of the stiletto fly species previously included in *Bibio* sensu Fabricius; he used *Phasia* Latreille, 1804 for the tachinid species previously included in *Thereva* sensu Fabricius.

8. Subsequent to Meigen (1824) practically all works have used the generic name *Thereva* for stiletto fly taxa and *Phasia* for tachinid taxa. These include all modern regional Diptera catalogs, manuals, textbooks and field guides; a list of many major works is held by the Commission Secretariat. A search of recent volumes of *Zoological Record* (1984–2001) yields 35 recent citations of the name *Thereva*, 137 citations of THEREVIDAE, and in the TACHINIDAE 26 citations of *Phasia* and 33 of PHASIINAE.

9. Although the type species of *Phasia* and *Ectophasia* are settled, and both names were placed on the Official List in 1970, modern catalogues differ in regard to the valid type species of *Thereva*. In the catalogue of Diptera of America north of Mexico (Cole, 1965, p. 352), *Musca plebeja* Linnaeus is given as the type species by subsequent monotypy by Latreille (1802). This was accepted by Lyneborg (1975, p. 93) in the Oriental catalogue of Diptera; by Lyneborg (1980, p. 320) in the Afrotropical catalogue of Diptera; by Irwin & Lyneborg (1989, p. 358) in the Australasian and Oceanian catalogue of Diptera; by Herting & Dely-Draskovits (1993, p. 409) in the Palaearctic catalogue of Diptera; and by Sabrosky (1999, p. 306). However, Lyneborg (1980, p. 320) noted that this typification for *Thereva* Latreille rests on the assumption that the use of *Thereva* by Fabricius (1798, p. 560) was a homonymous proposal separate from that of Latreille, because *M. plebeja* was not one of the nominal species associated with the name *Thereva* (see para. 4 above) and that Commission action was needed to validate this assumption.

10. In fact, seven of the generic names proposed by Latreille (1797) (but without any included species) were subsequently published by Fabricius in 1798 (with included species) for generic concepts different to those intended by Latreille; it is hardly likely that Fabricius proposed all these names independently. To date, the Commission has been asked to consider only one of these seven cases. In that ruling (Opinion 346, June 1955) the Commission considered the use of the scarabeid beetle name *Geotrupes* by Fabricius (1798, p. 7) to be a use in a different sense of *Geotrupes* Latreille, 1797 (p. 6), and not to be an independent junior homonym. This is likely to be the realistic interpretation, because not only did Latreille (1804, p. 142) complain about the misapplication of his own generic names by Fabricius but the latter also altered the application of names published by other authors.

11. Herting (1984, p. 168) designated *Conops subcoleoprata* Linnaeus, 1767 as the type species of *Thereva* Fabricius, 1798, and reiterated this in Herting & Dely-Draskovits (1993). In these two publications *Thereva* Fabricius, 1798 is identified as a junior homonym of *Thereva* Latreille, 1797 and a senior synonym of *Phasia* Latreille, 1804. Unfortunately, Herting proposed this type designation without formally establishing *Thereva* Fabricius as an independent and homonymous proposal of *Thereva* through application to the Commission. If Fabricius is considered to have used Latreille's name, rather than creating a new one, then Herting's designation of *Conops subcoleoprata* as the type species would fix *Thereva* as a tachinid genus, contrary to the long usage of *Thereva* and *Phasia* detailed above. This fixation, although in strict conformity with Articles 67.2.2 and 67.7 of the Code, would cause very wide confusion in the nomenclature of more than 200 species and several generic and family-group names; it would set aside an informal consensus of use which has prevented taxonomic confusion for more than 150 years.

12. We propose that Latreille's intention (see para. 5 above) and long usage (see para. 9 above) should be ratified by fixing *Musca plebeja* Linnaeus, 1758 as the type species of *Thereva*. This proposal was electronically circulated to a number of dipterists and the following specialists also support our proposal: Drs. K. Barber, Sault Sainte Marie, Ontario; Daniel Bickel and David McAlpine, Sydney, Australia; Brian Brown, Los Angeles, California; Robert Cannings, Victoria, British Columbia; Eric Fisher and Stephen Gaimari, Sacramento, California; Graham Griffiths, Sherwood Park, Alberta; Martin Hauser, Urbana, Illinois; Heikki Hippa & Thomas Pape, Stockholm, Sweden; Wayne Mathis, Allen Norrbom & Norman Woodley, Washington, D.C.; Adrian Pont, Oxford; Knut Rognes, Stavanger, Norway; Graham Rotheray, Edinburgh, Scotland; Margaret Schneider, Brisbane, Australia; Martin Speight, Dublin, Ireland; Terry Wheeler, Montreal, Quebec; and Brian Wiegmann and Shaun Winterton, Raleigh, North Carolina.

13. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous fixations of type species for the nominal genus *Thereva* Latreille, 1797 and to designate *Musca plebeja* Linnaeus, 1758 as the type species;
- (2) to place on the Official List of Generic Names in Zoology the name *Thereva* Latreille, 1797 (gender: feminine), type species by designation in (1) above *Musca plebeja* Linnaeus, 1758;
- (3) to place on the Official List of Specific Names in Zoology the name *plebeja* Linnaeus, 1758, as published in the binomen *Musca plebeja* (specific name of the type species of *Thereva* Latreille, 1797);
- (4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Thereva* Fabricius, 1798 (a junior homonym of *Thereva* Latreille, 1797).

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